

IN THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1(Currently Amended). A method of peak-to-average reduction of an oversampled signal for a digital communication system, comprising:

detecting a first peak portion of ~~an input~~ the oversampled signal that exceeds a predetermined threshold;

determining a width of said first peak portion;

applying a first shaping response to said first peak portion, said first shaping response having a variable width; and

varying said first shaping response width responsive to said first peak portion width.

2(Original). The method of Claim 1, wherein said first shaping response further having a variable scale factor determined by a difference of said predetermined threshold and a peak magnitude of said first peak portion.

3(Currently Amended). The method of Claim 1, wherein said determining ~~[[a]]~~ the width of said first peak portion includes estimating a number of samples which exceed said predetermined threshold.

4(Currently Amended). The method of Claim 3, wherein said variable width of said first shaping response ~~variable-width~~ is indicative of said estimated number of samples which exceed said predetermined threshold.

5(Original). The method of Claim 1 further comprising determining a second peak portion of said input signal which exceeds said predetermined threshold.

6(Original). The method of Claim 5 further comprising:
determining a width of said second peak portion; and
applying a second shaping response to said second peak portion, wherein said second shaping response having a variable width responsive to said second peak portion.

7(Currently Amended). The method of Claim 6, wherein said determining ~~[[a]]~~ the width of said second peak portion includes estimating a number of samples which exceed said predetermined threshold.

8(Original). The method of Claim 7, wherein said second shaping response variable width is indicative of said estimated number of samples which exceed said predetermined threshold.

9(Original). The method of Claim 1 further including applying a first echo modifier subsequent to application of said first shaping response, said first echo modifier having a variable scale.

10(Currently Amended). The method of Claim 9 further including varying said first echo modifier variable scale in response to said determined width of said first peak portion.

11(Currently Amended). An apparatus for peak-to-average reduction of an ~~over-sampled~~ oversampled signal in a digital communication system, comprising:

a buffer having an input adapted to receive said oversampled signal and operable to delay said oversampled signal by a predetermined number of samples;

a detector coupled to said buffer and operable to determine a first peak portion for said oversampled signal wherein at least a portion of said first peak portion exceeds a predetermined threshold, said detector further operable to estimate a width of said first peak portion;

a first modifying unit having an input adapted to receive an indication from said detector of said first peak portion width and operable to apply a variable width first shaping response to said first peak portion width subsequent to said oversampled signal output from said buffer.

12(Currently Amended). The apparatus of Claim 11, wherein application of said variable width first shaping response to said first peak portion width results is a first modified peak portion below said predetermined threshold.

13(Original). The apparatus of Claim 11, wherein said variable width first shaping response is indicative of said estimated width of said first peak portion.

14(Currently Amended). The apparatus of Claim 11, wherein said variable width first shaping response further having a variable scale factor determined by a difference of said predetermined threshold and a peak magnitude of said first peak portion.

15(Original). The apparatus of Claim 11, wherein said detector further operable to estimate a number of samples of said first peak portion which exceed said predetermined threshold.

16(Original). The apparatus of Claim 11, wherein said detector further operable to determine a second peak of said received signal wherein at least a portion of said second peak exceeds said predetermined threshold.

17(Original). The apparatus of Claim 16, wherein said detector is further operable to estimate a width of said second peak portion which exceeds said predetermined threshold.

18(Original). The apparatus of Claim 17 further including a second modifying unit having an input adapted to receive an indication from said detector of said second peak portion width and operable to apply a variable width second shaping response to said second peak portion width.

19(Currently Amended). The apparatus of Claim 18, wherein said variable width second shaping response ~~variable width~~ is indicative of said estimated width of said second peak portion.

20(Original). A system for peak-to-average reduction of an oversampled signal for a transceiver comprising a transmit portion and a receive portion coupled via a hybrid circuit, said system comprising:

a buffer having an input adapted to receive said oversampled signal on said transmit portion and operable to delay said oversampled signal by a predetermine number of samples;

a transmit peak detector coupled to said buffer and operable to determine a first peak for said oversampled signal, wherein at least a portion of said first peak exceeds a predetermined threshold;

a modifying unit having an input adapted to receive an indication from said transmit peak detector of said first peak portion and operable to apply a first shape modifier to said first peak portion subsequent to said oversampled signal output from said buffer; and

a shape canceller coupled to said receiver portion and having an input adapted to receive an indication from said transmit peak detector and operable to apply a variable scale cancellation signal subsequent to application of said first shape modifier.

21(Currently Amended). The system of Claim 20, wherein said transmit peak detector detector is further operable to estimate a width of said first peak portion.

22(Currently Amended). The system of Claim ~~20~~ 21, wherein said modifying unit is further operable to vary a width of said first shape modifier in relation to said estimated width of said first peak portion ~~width~~ and said shape canceller is further operable to vary said scale of said cancellation signal in relation to said estimated width of said first peak portion ~~width~~.